THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OF PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A sample tab comprising, a base plate having a top surface, a bottom surface, and at least a portion of said base plate adapted to permit transmission of electromagnetic radiation therethrough, a well disposed on said top surface of said base plate for retaining a sample, said well defined by a closed wall extending above said top surface of said base plate, and a cover plate, wherein at least a portion of said cover plate permits transmission of electromagnetic radiation therethrough, so that when said cover plate is in a closed position an optical path is formed through said portion of said base plate that permits transmission of electromagnetic radiation, said well, and said portion of said cover plate that permits transmission of electromagnetic radiation.

2. The sample tab of claim 1, wherein said cover plate is hingedly attached to said base plate, and movable between an open and a closed position.

3. The sample tab of claim 2, wherein said closed wall comprises one or more overflow openings, said closed wall surrounded by a containment wall defining an overflow ring therebetween.

4. The sample tab of claim 2, further comprising a locking member permitting said cover plate to be attached to said base plate when said cover plate is in said closed position.

5. The sample tab of claim 3, further comprising a locking member permitting said cover plate to be attached to said base plate when said cover plate is in said closed position.

6. The sample tab of claim 4, wherein said locking member comprises a circular ring capable of frictionally engaging an outer portion of said containment wall when said cover plate is in said closed position.

7. The sample tab of claim 4, wherein said locking member comprises one or more clips capable of engaging said cover plate to said base plate in said closed position.

8. The sample tab of claim 4, wherein said locking member is on said cover plate, said base plate or both said cover plate and said base plate.

9. The sample tab of claim 4 wherein said containment wall comprises a sealing member on its upper surface.

10. The sample tab of claim 9, wherein said sealing member is an O ring.

11. The sample tab of claim 9, wherein said sealing member is pliable material integral with said containment wall.

12. A sample tab for retaining a sample comprising. a base plate having a top surface, a bottom surface, and at least a portion of said base plate adapted to permit transmission of electromagnetic radiation therethrough, a well disposed on said top surface of said base plate for retaining a sample, said well defined by a closed wall extending above the top surface of said base plate, and a cover plate comprising a locking member and being hingedly attached to said base plate and moveable between an open and a closed position, at least a portion of said cover plate adapted to permit transmission of electromagnetic radiation therethrough, so that when said cover plate is in said closed position and said locking members engages said base plate, an optical path is formed through said portion of said base plate that permits transmission of electromagnetic radiation, said well, and said portion of said cover plate that permits transmission of electromagnetic radiation.

13. The sample tab of claim 12, wherein said closed wall comprises at least one overflow opening, and said closed wall surrounded by a containment wall defining an overflow ring therebetween.

14. The sample tab of claim 13 wherein said overflow ring comprises a sealing member on its upper surface.

15. The sample tab of claim 14, wherein said sealing member is an O ring.

16. The sample tab of claim 15, wherein said sealing member is a pliable material integral with said overflow ring.

17. The sample tab of claim 12, wherein said locking member comprises a circular ring capable of frictionally engaging an outer portion of said containment wall when said cover plate is in said closed position.

18. The sample tab of claim 12, wherein said locking member comprises one or more clips capable of frictionally engaging and attaching said cover to said base plate in said closed position.

19. The sample tab of claim 12, wherein said locking member is on said cover plate, base plate or both said cover plate and said base plate.

20. A method for sample analysis comprising, adding a sample to the sample tab defined in claim 1, and closing said cover plate so as to remove air bubbles from said well, and inserting said sample tab within an instrument for analysis.

21. The method of claim 20, wherein said cover plate comprises a locking member permitting said cover plate to be attached to said base plate when said cover plate is in said closed position.

22. The method of claim 21, wherein said sample is either a biological or a non-biological sample.

23. The method of claim 22, wherein said sample is a semi-solid or a fluid sample.

24. A sample tab comprising, a base plate having a top surface, a bottom surface, and at least a portion of said base plate adapted to reflect electromagnetic radiation, a well disposed on said top surface of said base plate for retaining a sample, said well defined by a closed wall extending above said top surface of said base plate, and a cover plate attached to said base plate, wherein at least a portion of said cover plate permits transmission of electromagnetic radiation therethrough, so that when said cover plate is in a closed position an optical path is formed through said portion of said cover plate that permits transmission of electromagnetic radiation, said well,

and reflects off of said portion of said base plate that reflects electromagnetic radiation, and back through said well and said portion of said cover plate.

25. A sample tab comprising, a base plate having a top surface, a bottom surface, and at least a portion of said base plate adapted to transmit electromagnetic radiation therethrough, a well disposed on said top surface of said base plate for retaining a sample, said well defined by a closed wall extending above said top surface of said base plate, and a cover plate, wherein at least a portion of said cover plate reflects transmission of electromagnetic radiation so that when said cover plate is in a closed position an optical path is formed through said portion of said base plate that permits transmission of electromagnetic radiation, said well, and reflects off of said portion of said cover plate that reflects electromagnetic radiation, and back through said well and said portion of said base plate.

26. A method for sample analysis comprising,

i) placing said sample within said sample tab of claim 1;

ii) positioning said sample tab within a sample holder in a horizontal plane;

iii) projecting electromagnetic radiation substantially perpendicular to said horizontal plane through said sample; and

iv) analysing said sample.